

TopSat

Testing different ideas for SBS in ISTAR

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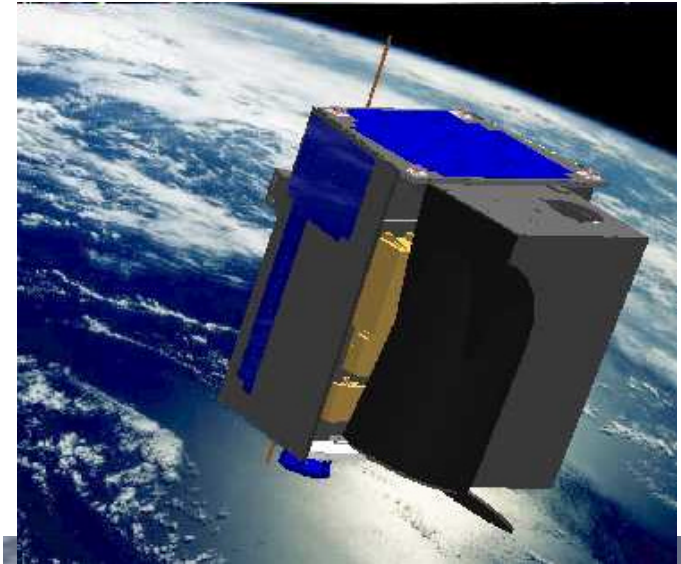


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Report Documentation Page		
Report Date 25SEP2001	Report Type N/A	Dates Covered (from... to) 25SEP2001 - 27SEP2001
Title and Subtitle TopSat Testing different ideas for SBS in ISTAR Laboratory		Contract Number
		Grant Number
		Program Element Number
Author(s) Brooks, Paul		Project Number
		Task Number
		Work Unit Number
Performing Organization Name(s) and Address(es) QinetiQ		Performing Organization Report Number
Sponsoring/Monitoring Agency Name(s) and Address(es) EOARD PSC 802 BOX 14 FPO 09499-0014		Sponsor/Monitor's Acronym(s)
		Sponsor/Monitor's Report Number(s)
Distribution/Availability Statement Approved for public release, distribution unlimited		
Supplementary Notes See Also ADM001419 for whole conference on CD-ROM. These papers are from the Harnessing Advanced Technology for C4ISTAR, The Second Annual Advanced Technology Conference, held 25-27 September 2001 at The Great Malvern Theatre Complex., The original document contains color images.		
Abstract		
Subject Terms		
Report Classification unclassified		Classification of this page unclassified
Classification of Abstract unclassified		Limitation of Abstract UU
Number of Pages 9		

Introduction

- TopSat programme started Oct 2000 under joint funding from BNSC and UK MoD
- Partnership of QinetiQ, SSTL, RAL and Infoterra
- Provide 2.5m resolution imagery direct to local users
- Enable user control and scheduling
- Launch planned for late 2003



Specification

- Mission
 - 2.5m target resolution, panchromatic baseline + 3 band colour at 5m
 - 15% system MTF, 50:1 SNR
 - 15km FoV
 - 1 year mission life
 - Near real time operations for in-theatre demonstration



Why?

- For the MoD
 - To understand and test different architectures for the command, control and dissemination of space based surveillance information in a tactical environment.
 - To determine the capability of low cost surveillance systems and equipment.
 - Flexible operations
 - Higher timeliness through constellations
- For QinetiQ
 - Drive down costs associated with space missions to increase number and diversity of missions

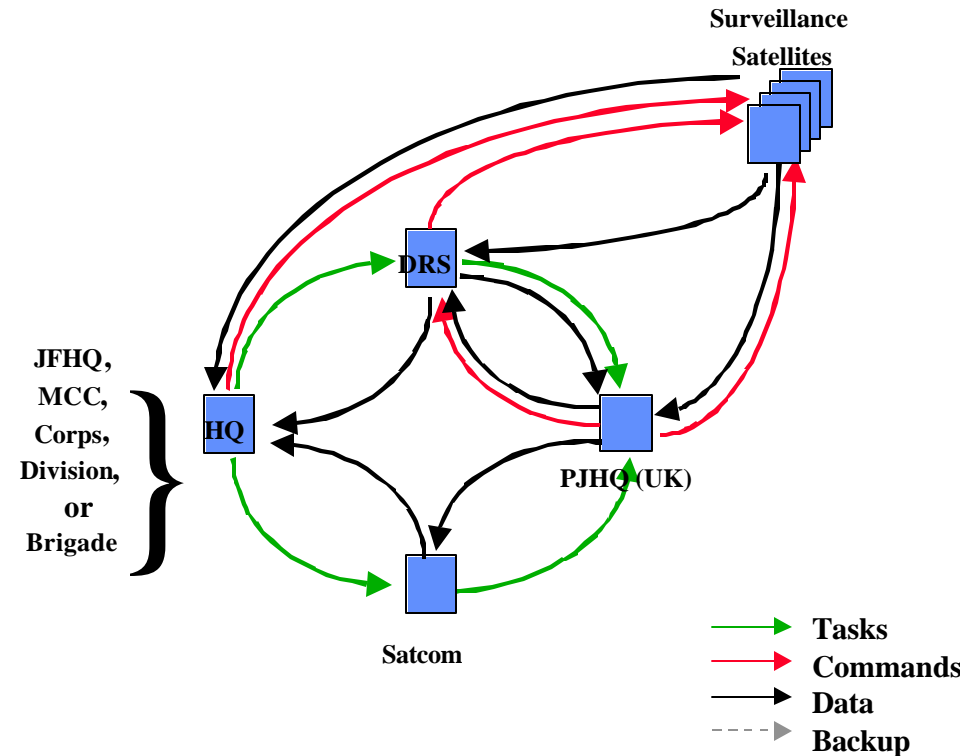
TopSat in ISTAR

- Tests of different mechanisms and strategies for information dissemination
- Utility of contextual information and direct access
- Practical implications of local use of space-based surveillance (SBS) to support higher level studies
- Trials already in progress
 - Close involvement of end users

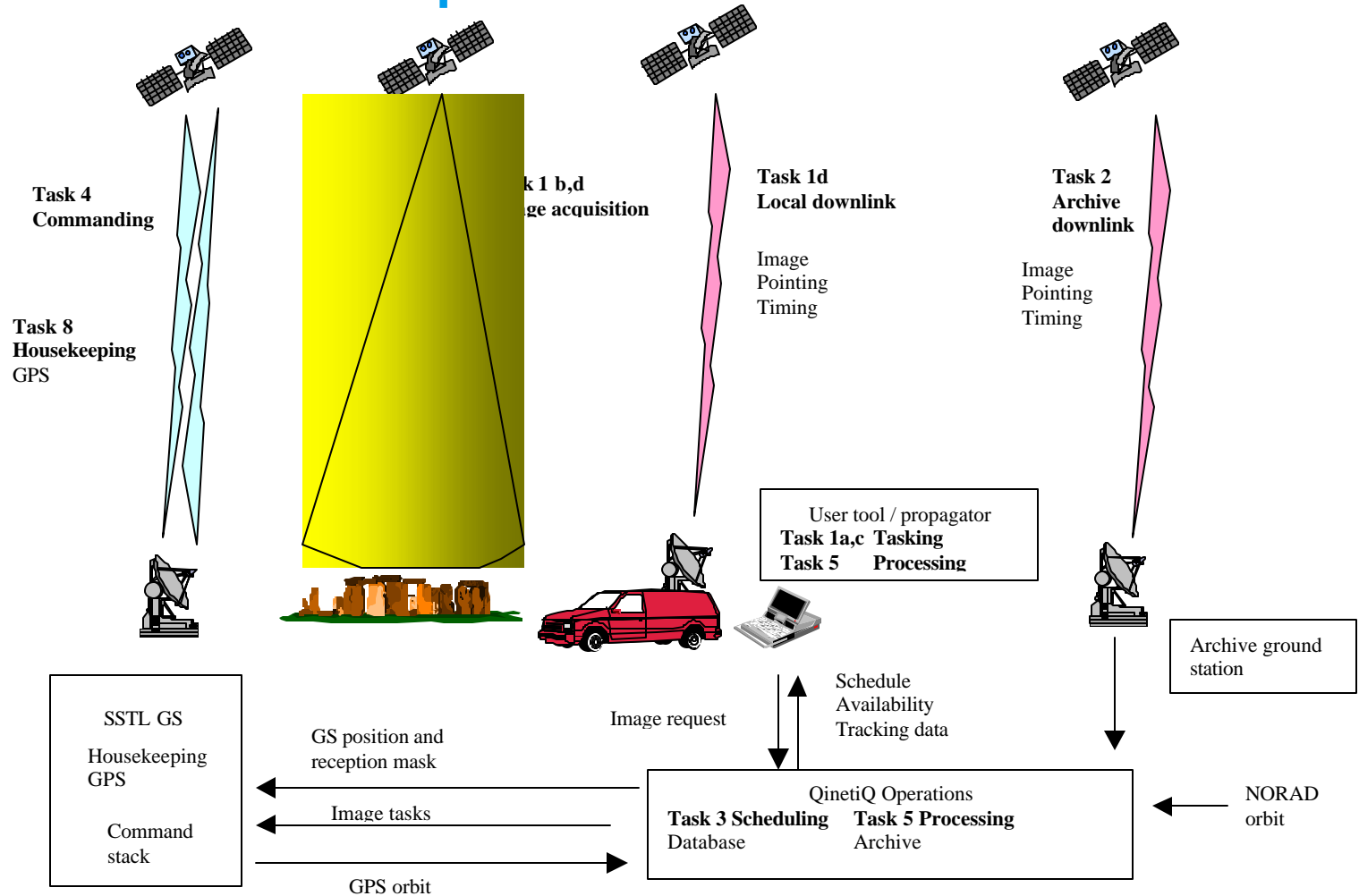


Operations and trials

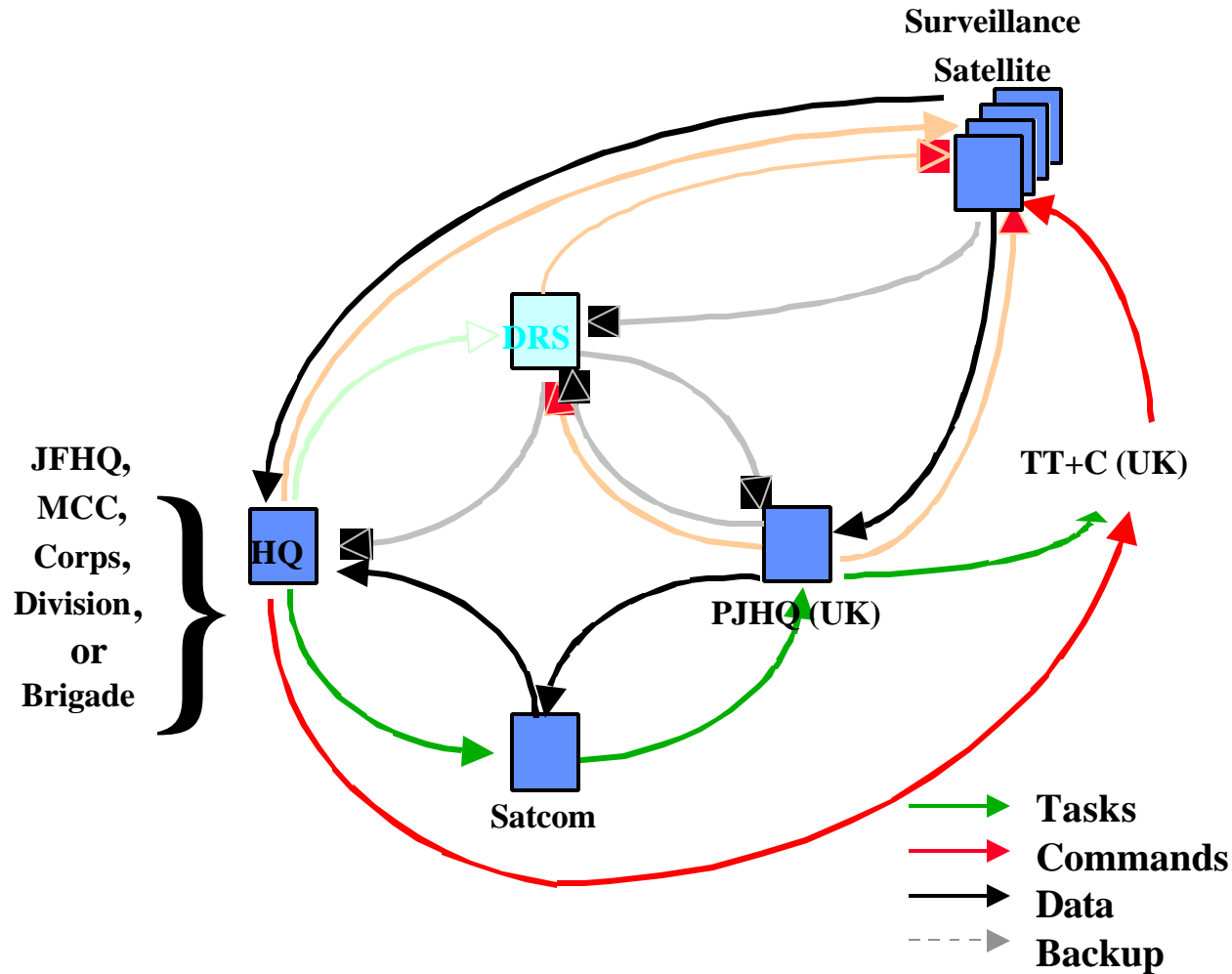
- Technical parameters
- Operational trials
 - Based on UK conops for SBS
 - Combination of link simulation and physical implementation to try multiple paths



Operation of TopSat



How does this fit?



Conclusion and an offer

- TopSat is in build and should be available for MoD sponsored operations and trials in 2004
- Mobile ground station and access to CSI assets is already available and open to extension
- Close involvement of operational units is critical to maximising the benefit of the demonstrator to UK MoD.
- Groups with novel ideas that support UK MoD objectives are welcomed for consideration in the TopSat experiment plan.